

CLAIMS

[1] A power transmission mechanism for use in a model vehicle, comprising:

a drive unit for traveling providing a drive force for traveling to said model vehicle;

a first rotating shaft to which the drive force of said drive unit for traveling is transmitted;

a first differential gear and a second differential gear to which the rotation of said first rotating shaft is transmitted;

a first wheel rotated by said first differential gear;

a second wheel rotated by said second differential gear;

a drive unit for turning providing a drive force for turning to said model vehicle;

a second rotating shaft to which the drive force of said drive unit for turning is transmitted;

a third differential gear to which the rotation of said second rotating shaft is transmitted;

a third rotating shaft transmitting the rotation transmitted from said third differential gear to said first differential gear; and

a control part controlling the rotations of said drive unit for traveling and said drive unit for turning;

wherein said third differential gear transmits the rotation transmitted from said second rotating shaft to said third rotating shaft through differential rotation,

and said first differential gear transmits the rotation transmitted from said third rotating shaft to said first wheel through differential rotation, and wherein said second rotating shaft transmits the rotation transmitted from said drive unit for turning to said second differential gear, and said second differential gear transmits the rotation transmitted from said second rotating shaft to said second wheel through differential rotation.

[2] A power transmission mechanism according to claim 1, wherein when said model vehicle is to travel in a straight line, said control part drives said drive unit for traveling and stops said drive unit for turning.

[3] A power transmission mechanism according to claim 1, wherein when said model vehicle is to make a slow turn, said control part drives said drive unit for traveling and, at a same time, drives said drive unit for turning, thereby producing a difference in number of revolutions of left- and right-side wheels.

[4] A power transmission mechanism according to claim 3, wherein when said slow turn is to be made, rotations in a same direction are applied from said drive unit for traveling and said drive unit for turning to either one of said first differential gear and said second differential gear to increase the number of revolutions of either one of said first wheel and said second wheel, and at a same time, rotations in opposite directions to each other are applied from said drive unit for traveling and said drive unit for

turning to the other of said first differential gear and said second differential gear to reduce the number of revolutions of the other of said first wheel and said second wheel.

[5] A power transmission mechanism according to claim 1, wherein when said model vehicle is to make a pivot turn, said control part drives said drive unit for traveling and said drive unit for turning at predetermined numbers of revolutions, thereby stopping rotation of either one of said first wheel and said second wheel and rotating the other of said first wheel and said second wheel.

[6] A power transmission mechanism according to claim 5, wherein when said pivot turn is to be made, rotations of said drive unit for traveling and said drive unit for turning are applied to either one of said first differential gear and said second differential gear at a same number of revolutions but in opposite directions, thereby stopping rotation of either one of said first wheel and said second wheel.

[7] A power transmission mechanism according to claim 1, wherein when said model vehicle is to make a spin turn, said control part stops said drive unit for traveling and drives said drive unit for turning, thereby rotating said first wheel and said second wheel in opposite directions.

[8] A power transmission mechanism according to claim 7, wherein when said spin turn is to be made, rotation of said drive unit for turning is applied to either one of said first differential gear and said second differential gear

to rotate either one of said first wheel and said second wheel, and at a same time, rotation of said drive unit for turning is applied to the other of said first differential gear and said second differential gear at a same number of revolutions as that of the rotation applied to said one of said first differential gear and said second differential gear but in an opposite direction to that of said rotation, thereby rotating the other of said first wheel and said second wheel in an opposite direction to that of rotation of said one of said first wheel and said second wheel.

[9] A power transmission mechanism according to any one of claims 1 to 8, further comprising:

a first speed-reducing mechanism that transmits rotation of said drive unit for traveling to said first rotating shaft after reducing speed of said rotation.

[10] A power transmission mechanism according to any one of claims 1 to 9, further comprising:

a second speed-reducing mechanism that transmits rotation of said drive unit for turning to said second rotating shaft after reducing speed of said rotation.

[11] A power transmission mechanism according to any one of claims 1 to 10, further comprising:

a first rotating shaft left gear that transmits rotation of said first rotating shaft to said first differential gear; and

a first rotating shaft right gear that transmits rotation of said first rotating shaft to said second differential gear.

[12] A power transmission mechanism according to claim 11, further comprising:

a first differential gear peripheral gear which is provided on said first differential gear and to which rotation of said first rotating shaft left gear is transmitted; and

a second differential gear peripheral gear which is provided on said second differential gear and to which rotation of said first rotating shaft right gear is transmitted.

[13] A power transmission mechanism according to claim 12, wherein said first wheel rotates in a same direction as said first differential gear peripheral gear, and said second wheel rotates in a same direction as said second differential gear peripheral gear.

[14] A power transmission mechanism according to any one of claims 1 to 13, wherein said model vehicle is a tracked vehicle.